## FILE 'HOME' ENTERED AT 08:13:22 ON 23 APR 2007

=> file reg

COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION 0.21 0.21

FILE 'REGISTRY' ENTERED AT 08:14:06 ON 23 APR 2007 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 20 APR 2007 HIGHEST RN 931582-00-2 DICTIONARY FILE UPDATES: 20 APR 2007 HIGHEST RN 931582-00-2

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

```
=> E "CANNABICHROMENE"/CN 25
E1
             1
                   CANNABICHROME/CN
E2
                    CANNABICHROMENATE SYNTHASE/CN
             1
             1 --> CANNABICHROMENE/CN
E3
E4
             1
                    CANNABICHROMENE 3,5-DINITROCARBANILATE/CN
E5
             1
                    CANNABICHROMENE GLUCURONIDE/CN
E6
             1
                    CANNABICHROMENE, TETRAHYDRO-/CN
E7
             1
                   CANNABICHROMENE, TETRAHYDRO-, (-)-/CN
E8
             1
                   CANNABICHROMENE, TETRAHYDRO-, 3,5-DINITROCARBANILATE. (-)-/CN
E9
             1
                   .CANNABICHROMENIC ACID/CN
E10
             1
                   CANNABICHROMENIC ACID SYNTHASE/CN
E11
             1
                   CANNABICHROMEORCIN/CN
E12
             1
                   CANNABICHROMEORCINIC ACID/CN
E13
             1
                   CANNABICHROMEORCINIC ACID METHYL ESTER/CN
E14
             1
                   CANNABICHROMEVARIN/CN
E15
             1
                   CANNABICHROMEVARINIC ACID/CN
E16
             1
                   CANNABICHROMEVARINIC ACID METHYL ESTER/CN
E17
             1
                   CANNABICITRAN/CN
E18
             1
                   CANNABICOUMARONONE/CN
E19
             1
                   CANNABICYCLOL/CN
E20
             1
                   CANNABICYCLOLIC ACID/CN
E21
             1
                   CANNABICYCLOVARIN/CN
E22
             1
                   CANNABIDIHYDROPHENANTHRENE/CN
E23
             1
                   CANNABIDIOL/CN
E24
             1
                   CANNABIDIOL 2',6'-DIACETATE/CN
E25
                   CANNABIDIOL ALDEHYDE DIACETATE/CN
=> S E3
L1
             1 CANNABICHROMENE/CN
```

```
L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS on STN
```

RN 20675-51-8 REGISTRY

ED Entered STN: 16 Nov 1984

CN 2H-1-Benzopyran-5-ol, 2-methyl-2-(4-methyl-3-penten-1-yl)-7-pentyl- (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 2H-1-Benzopyran-5-ol, 2-methyl-2-(4-methyl-3-pentenyl)-7-pentyl- (7CI, 8CI, 9CI)

OTHER NAMES:

CN (±)-Cannabichromene

CN Cannabichrome

CN Cannabichromene

CN Cannanbichromene

CN NSC 291831

CN Pentylcannabichromene

DR 18793-28-7, 23559-86-6, 23701-99-7

MF C21 H30 O2

CI COM

LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, DDFU, DRUGU, EMBASE, IPA, MEDLINE, NAPRALERT, RTECS\*, SPECINFO, TOXCENTER, USPAT2, USPATFULL

(\*File contains numerically searchable property data)

Me- (CH<sub>2</sub>) 4 
$$\stackrel{\text{Me}}{\longrightarrow}$$
 CH<sub>2</sub>- CH<sub>2</sub>- CH= CMe<sub>2</sub>

## \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

199 REFERENCES IN FILE CA (1907 TO DATE)

6 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

200 REFERENCES IN FILE CAPLUS (1907 TO DATE)

2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

THE ESTIMATED COST FOR THIS REQUEST IS 1.95 U.S. DOLLARS DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS on STN

RN 20675-51-8 REGISTRY

ED Entered STN: 16 Nov 1984

CN 2H-1-Benzopyran-5-ol, 2-methyl-2-(4-methyl-3-penten-1-yl)-7-pentyl- (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 2H-1-Benzopyran-5-ol, 2-methyl-2-(4-methyl-3-pentenyl)-7-pentyl- (7CI, 8CI, 9CI)

OTHER NAMES:

CN (±)-Cannabichromene

CN Cannabichrome

CN Cannabichromene

CN Cannanbichromene

CN NSC 291831

CN Pentylcannabichromene

DR 18793-28-7, 23559-86-6, 23701-99-7

MF C21 H30 O2

CI COM

LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, DDFU, DRUGU, EMBASE, IPA, MEDLINE, NAPRALERT, RTECS\*, SPECINFO, TOXCENTER, USPAT2, USPATFULL

(\*File contains numerically searchable property data)

Me- 
$$(CH_2)_4$$
OH
$$CH_2-CH_2-CH=CMe_2$$

## \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

199 REFERENCES IN FILE CA (1907 TO DATE)

6 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

200 REFERENCES IN FILE CAPLUS (1907 TO DATE)

2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

## => file caplus\

'CAPLUS\' IS NOT A VALID FILE NAME

SESSION CONTINUES IN FILE 'REGISTRY'

Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files that are available. If you have requested multiple files, you can specify a corrected file name or you can enter "IGNORE" to continue accessing the remaining file names entered.

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 7.80 8.01

FULL ESTIMATED COST

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FILE COVERS 1907 - 23 Apr 2007 VOL 146 ISS 18 FILE LAST UPDATED: 22 Apr 2007 (20070422/ED)

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=> s cannabichromene or 20675-51-8
 REG1stRY INITIATED

Substance data SEARCH and crossover from CAS REGISTRY in progress... Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

L3 200 L2

151 CANNABICHROMENE

9 CANNABICHROMENES

152 CANNABICHROMENE

(CANNABICHROMENE OR CANNABICHROMENES)

L4 221 CANNABICHROMENE OR L3

=> s depressi? or mood(a)disorder

97883 DEPRESSI?

7000 MOOD

123 MOODS

7063 MOOD

(MOOD OR MOODS)

258474 DISORDER

199324 DISORDERS

408037 DISORDER

(DISORDER OR DISORDERS)

2030 MOOD(A)DISORDER

L5 98757 DEPRESSI? OR MOOD(A) DISORDER

=> s 14 and 15

L6 5 L4 AND L5

=> d ti au abs so py 1-5

L6 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

Pharmaceutical compositions comprising cannabichromene-type compounds for the treatment of mood disorders

IN Musty, Richard E.; Deyo, Richard

GI

Me Me 
$$R^1$$
  $R^2$   $R^3$   $R^4$   $R^4$   $R^4$ 

The invention relates to the use of cannabichromene-type compds. AB and derivs. thereof in the treatment of mood disorders Compds. of the invention include I (r1 = OH; R2 = H, COOH; R3 - C1-8 alkyl; R4 = H) and derivs. thereof.

SO PCT Int. Appl., 35 pp. CODEN: PIXXD2

PY 2005

2006

2006

L6 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

TI Intraocular pressure, ocular toxicity and neurotoxicity after administration of  $\Delta 9$ -tetrahydrocannabinol or cannabichromene

ΑU Colasanti, Brenda K.; Powell, Stephen R.; Craig, Charles R. AB

Δ9-THC [1972-08-3] or cannabichromene 20675-51-8], a structurally diverse naturally occurring cannabinoid, was delivered unilaterally to the corneas of cats either acutely by application of single drops or chronically via osmotic minipumps over a period of 9 days. Whereas  $\Delta 9$ -THC only reduced intraocular pressure (IOP) minimally after acute administration, this cannabinoid produced substantial redns. in ocular tension during the entire period of chronic administration. Ocular toxicity during chronic treatment, however, was pronounced; conjunctival chemosis, erythema, and hyperemia were sustained, and corneal opacities approximating the site of drug delivery became evident within 3-5 days. In contrast, cannabichromene did not significantly alter IOP either acutely or during the 9 days of chronic administration, and ocular toxicity was not apparent. After systemic administration of  $\Delta 9$ -THC to rats, a dose-related increase in the appearance of 8-13 Hz polyspike discharges became evident in the electrocorticogram during wakefulness and behavioral depression. These polyspikes subsequently reappeared during rapid eye movement (REM) sleep episodes. Cannabichromene was devoid of this effect. It appears that, in contrast with acute administration, chronic delivery of  $\Delta 9$ -THC to cat eyes produces substantial redns. The tension lowering effect, however, is accompanied by considerable ocular toxicity and neurotoxicity. As cannabichromene lacked these activities, the terpenoid portion of the cannabinoid structure appears to be important for their mediation.

SO Experimental Eye Research (1984), 38(1), 63-71

CODEN: EXERA6; ISSN: 0014-4835

PY 1984

L6 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN TI The effect of cannabichromene on mean blood pressure, heart rate, and respiration rate responses to tetrahydrocannabinol in the anesthetized rat

UA O'Neil, J. D.; Dalton, W. S.; Forney, R. B.

GI

AB Expts. were conducted to investigate the potential for interaction of cannabichromene (CBC) [20675-51-8], a major cannabinoid present in cannabis, and Δ9-tetrahydrocannabinol (I) [1972-08-3], the primary active principle in cannabis. Male Wistar rats (220-260 g) were anesthetized with urethane and then given 2 mg/kg I, 10 mg/kg CBC, or bovine serum albumin vehicle according to a factorial (crossed) design. CBC had a hypotensive effect at the dose used in this study. CBC also caused a depression in respiration rate. When given alone, CBC had no effect on heart rate. The hypotensive effect and decreased respiration rate caused by I did not appear to be altered by simultaneous administration of CBC. CBC did, however, potentiate the decrease in heart rate caused by I. The mechanism of this interaction remains to be determined SO Toxicology and Applied Pharmacology (1979), 49(2), 265-70 CODEN: TXAPA9; ISSN: 0041-008X

PY 1979

AB Rats were exposed to daily doses of smoke from Turkish marihuana containing cannabidiol (CBD) [13956-29-1], cannabichromene (CBCH) 20675-51-8], and  $\Delta 9$ -tetrahydrocannabinol (I) [1972-08-3] or to smoke from placebo marihuana impregnated with CBD or CBCH. delayed lethal toxicity occurred in both sexes at the high dose of Turkish marihuana (0.2 mg cannabinoids/kg) with no deaths in CBD, CBCH, or placebo groups. Hypoactivity was observed by the second week among rats exposed to smoke from Turkish marihuana or placebo marihuana impregnated with CBD or CBCH. No hyperactivity or hypersensitivity was evident after tolerance developed to depressive signs. Turkish marihuana smoke suppressed growth rates and respiration rates more than did smoke containing CBD or CBCH without I. Hematol. variations were more closely associated with CBCH, but organ-weight changes were related to Turkish marihuana and CBD. The only drug-related histopathol. finding was seminiferous tubule degeneration with interference in sperm maturation. This dose-related effect was most severe in CBD-treated rats. Estimated LD50 values based on cannabinoid content were 10 mg/kg for Turkish marihuana smoke and approx. 35 mg/kg for smoke containing CBD or CBCH. Thus, CBD and CBCH contribute to the toxicity of marihuana smoke and influence the effects of I.

SO Toxicology and Applied Pharmacology (1979), 48(3), 375-86 CODEN: TXAPA9; ISSN: 0041-008X

PY 1979

L6 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

TI Natural cannabinoids: apparent depression of nucleic acids and protein synthesis in cultured human lymphocytes

AU Nahas, G. G.; Desoize, B.; Armand, J. P.; Hsu, J.; Morishima, A.

GI

AB The lymphocyte response to phytohemagglutinin or to allogenic cells as measured by 3H-thymidine incorporation was equally inhibited by 10-5-10-4 M of Δ8-tetrahydrocannabinol [5957-75-5] and Δ9-tetrahydrocannabinol (I) [1972-08-3], their 11-hydroxy metabolites, cannabidiol [13956-29-1], cannabinol [521-35-7], cannabichromene [20675-51-8], and cannabicyclol [21366-63-2]. A similar inhibiting effect on T lymphocyte transformation was also produced by a similar concentration of olivetol [500-66-3]. I depressed 3H-leucine and 3H-uridine uptake in cultured lymphocytes stimulated with phytohemagglutinin. Cannabinoids may act directly on DNA formation by inhibition of precursor uptake and indirectly through inhibition of protein and RNA synthesis.

SO Pharmacol. Marihuana (1976), Volume 1, 177-86. Editor(s): Braude, Monique C.; Szara, Stephen. Publisher: Raven, New York, N. Y. CODEN: 34AYA7

PY 1976

=>

Uploading C:\Program Files\Stnexp\Queries\cannabichromene.str

STRUCTURE UPLOADED L1

=> d l1

L1 HAS NO ANSWERS

L1 STR

Structure attributes must be viewed using STN Express query preparation.

=> s l1 fam sam

SAMPLE SEARCH INITIATED 09:42:08 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED -6 TO ITERATE

100.0% PROCESSED 6 ITERATIONS 0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

> BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 6 TO 266

PROJECTED ANSWERS: O TO

L20 SEA FAM SAM L1

=> s l1 fam full

FULL SEARCH INITIATED 09:42:15 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED -103 TO ITERATE

100.0% PROCESSED 103 ITERATIONS 1 ANSWERS

SEARCH TIME: 00.00.01

L3 1 SEA FAM FUL L1

=> d scan

L3

1 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN 2H-1-Benzopyran-5-ol, 3,4-dihydro-2-methyl-2-(4-methyl-3-pentenyl)-7-IN propyl- (9CI)

C19 H28 O2 MF

$$\begin{array}{c} \text{N-Pr} \\ \text{OH} \\ \end{array}$$

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

ALL ANSWERS HAVE BEEN SCANNED

=> file caplus
COST IN U.S. DOLLARS

COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION FULL ESTIMATED COST 68.15 68.36

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FILE COVERS 1907 - 30 Apr 2007 VOL 146 ISS 19 FILE LAST UPDATED: 29 Apr 2007 (20070429/ED)

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=> s 13

L4 1 L3

=> d ti au abs so py

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN

TI Pharmaceutical compositions comprising cannabichromene-type compounds for the treatment of mood disorders

IN Musty, Richard E.; Deyo, Richard

GI

AB The invention relates to the use of cannabichromene-type compds. and derivs. thereof in the treatment of mood disorders. Compds. of the invention include I (r1 = OH; R2 = H, COOH; R3 - C1-8 alkyl; R4 = H) and derivs. thereof.

SO PCT Int. Appl., 35 pp. CODEN: PIXXD2

PY 2005 2006 2006

=>